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NORMAN KEN OUCHI
P.O. BOX 20111
SAN JOSE, CA 95160

EXAMINER

CHOL, PETER H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/036,200

Applicant(s)

OUCHI, NORMAN KEN

Examiner

PETER CHOI

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 28, 2008 has been entered.

Response to Amendment

2. The amendment filed August 28, 2008 did not cancel or add any claims, and further amended claims 21, 22, 24, 25, 29, 30, 32 and 33.

3. The previous rejection of claims 21-39 raised under 35 USC 112, second paragraph, is withdrawn in view of claim amendments submitted August 28, 2008.

4. The following is a **NON-FINAL** office action upon examination of application number 10/036,200. Claims 21-39 are pending in the application and have been examined on the merits discussed below.

Response to Arguments

5. Applicant's arguments filed August 28, 2008 have been fully considered but they are not persuasive.

Applicant argues that Du is not taught to be processed in a distributed computer, and further does not form a first route from the first object route.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., processing by a distributed computer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Du does not teach forming a first route by connecting the first route segment and the second route segment based on the sequence of the central route.

The Examiner respectfully disagrees. Du et al. teaches the creation and development of workflow processes that includes a sequence of activities and tasks (i.e., route segments) that are governed by a plurality of rules.

Applicant argues that Du does not teach connecting the sequences of process steps to form a connected route with the feedback connection for asynchronous processing in a distributed computer.

The Examiner respectfully disagrees. Du et al. teaches connecting sequences of process steps to form a connected route with a feedback connection (see at least Figure 7, where a plurality of work and rule nodes are connected together in a sequence, along with reset arcs, which are used to support repetitions or explore alternatives in a workflow process).

Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., processing by a distributed computer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. The following arguments presented by the Applicant with respect to claims 21-39 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Du does not teach connecting the sequence of process steps to form a connected route with the alternative route segment for asynchronous processing in a distributed computer.

However, the Examiner notes that, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the

features upon which applicant relies (i.e., processing by a distributed computer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Du does not teach the connecting of sequences of process steps and does not provide for notification of initiation of the process segment corresponding to a work node embedded in the connected sequence.

However, the Examiner notes that, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., notification of initiation of the process segment corresponding to a work node embedded in a connected sequence of process steps) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that neither Du nor HP Open PM teach associating route segments with abstract level object steps and connecting the associated route segments in the sequence of the object route for asynchronous, independent execution in a detailed level workflow at the distributed computer.

Applicant argues that neither Du nor Kenton teach forming a route for execution in a second workflow means from an object route for execution in a separate, independent, asynchronous first workflow means by associating each object step in the object route with a route segment and connecting the associated route segments in the sequence of the object steps.

Applicant argues that neither Du nor Kenton teach starting the object route in the first workflow and the route in the second workflow and completing the route in the second workflow and the object route in the first workflow.

Claim Rejections - 35 USC § 101

7. Claims 21-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

8. Claims 21-31 are rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876). If neither of these requirements is met by the

claim, the method is not a patent eligible process under 35 U.S.C. 101 and is non-statutory subject matter.

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state. In the instant case, the apparatus used to accomplish the claimed method steps is not disclosed; it is unclear whether the steps are performed by a computer processor or performed within the mind of a human user. Dependent claims 22-28 and 30-31 merely add further details of the workflow coordination method recited in claims 21 and 29 without including any tie to another statutory category nor any transformation of subject matter into a different state or thing.

Here, applicant's method steps, fail the first prong since they are not tied to another statutory class and can be performed without the use of a particular apparatus. Thus, claims 21-31 are non-statutory since they may be performed within the human mind.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 33-39 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 33-39 are method claims, but are dependent on claim 32, a system claim. Therefore, it is unclear whether claims 33-39 are directed towards a method (such as that of claim 21 or claim 29), or the system presented in claim 32. Clarification is required.

Official Notice

11. In the previous Office Action mailed May 5, 2006, notice was taken by the Examiner that certain subject matter is old and well known in the art. Per MPEP 2144.03(c), these statements are taken as admitted prior art because no traversal of this statement was made in the subsequent response. Specifically, it has been taken as prior art that:

- Workflow can be applied to a plurality of work processes, including manufacturing and production
- It is old and well known in the art that bar code readers and radio frequency (RFID) tags are amongst the plurality of input/output devices that are used in business procedure

- Bar codes and RFID tags are beneficial in that they enable companies to track, manage, and monitor the real-time status of and whereabouts of inventory, especially in the manufacturing process. They also give valuable information about the quantity of products being bought or received
- It is old and well known in the art to connect a plurality of networked computers to the Internet

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 21-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al. (US Patent #5,826,239) in view of Kim et al. (US 2002/0065701).

As per claim 21, Du et al. teaches a method for coordinating an object route directed first workflow with a second route directed workflow separate from the first workflow, using an object step to derive the route for the second workflow from the object route for the first workflow, the method comprising:

(a) defining a first object step **{W1}** (**representing process activities in business objects to create new workflow processes by assembling business objects to describe workflow processes**) with an associated first route segment **{forward arc connecting to W2}** (**business object is a representation of something active in the business domain, including its business name and definition, attribute, behavior and constraints. It provides a uniform way to encapsulate legacy systems and applications and a direct mapping, in understandable business terms, between the business model and the possibly sophisticated operational procedures of the workflow process system**), a sequence of steps (**each workflow process includes a sequence of activities**) to be connected to other route segments **{W1 is connected to W2 by a route segment}** (**some aspects of the workflow process can be preplanned and deliberately structured; parts of the workflow process involving certain departments can be preplanned**) [Column 6, lines 40-41, Column 7, lines 11-17, Column 10, lines 23-34, Figure 7];

(b) defining a second object step **{W2}** with an associated second route segment **{the arc between W1 and W2, the forward arc between W2 and R3}**, a sequence of steps to be connected to other route segments **{W2 is connected to R3 by a route segment}** [Figure 7];

(c) defining a first workflow means directed by an object route, a sequence of object steps **{W1, W2, W5, W6, W7, W8}** (**each workflow process 18 includes a sequence of activities, each of which is ordinarily performed by one of the computer systems 12a-d in conjunction with an associated user 14a-b or machine**

15a-b; the specific structure and flow of each workflow process can be preplanned; parts of the workflow process involving certain departments can be preplanned; a workflow process is a description of the sequencing, timing, dependency, data, physical agent allocation, business rule and organization policy enforcement requirements of business activities needed to enact work; A work node 41 is a placeholder for a process activity, which is a logical representation of a piece of work contributing towards the accomplishment of a process 18. A process activity is mapped to the invocation of an operation on business objects during the execution of the process...A process activity definition includes a forward activity and optionally, a compensation activity, a cancel activity, a resource management activity, timeout and deadline information and input and output data) [Column 6, lines 40-43, Column 7, lines 4-5 and 16-17, Column 8, lines 11-15, 45-58, Figure 7];

(e) defining a first object route **{W1, W2, W5, W6, W7, W8}**, a sequence of object steps **(each workflow process includes a sequence of activities; workflow process is specified by the process design modules via the workflow process definition interface)**, including the first object step and second object step, providing conditional branches, parallel paths, and loops such that all connected object steps are included **(The workflow process 18 can span several business organizations with multiple activities potentially performed in parallel; reset arcs are used to support repetitions {i.e., loops} or explore alternatives {i.e., parallel paths} in a workflow process 18; In OpenPM, a rule node contains a list of condition-action rules {i.e.,**

conditional steps/actions}, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires **outgoing arcs**) [Column 6, lines 40-52, Column 7, lines 59-67, Column 8, lines 31-32, Column 19, lines 60-67, Figure 7];

(f) forming a first route **{W1, W2, R3, W5, R5, W6, R6, W7, R7, W8, R8}** from the first object route **{W1, W2, W5, W6, W7, W8}**, by connecting the route segments associated with each object step **{forward arcs and reset arcs between nodes}**, including the first route segment and second route segment **{W1, W2}**, in the sequence of the object steps of the first object route **(workflow process is represented as a directed graph consisting of a set of nodes connected by arcs; work nodes represent activities to be performed and rule nodes are used to specify workflow processes that are more complex than a simple sequence)** [Column 8, lines 15-17, 45-47, and 59-61, Figure 7];

(g) providing the first object route to direct the first workflow means **{the workflow process represented by Figure 7 is “provided”, or applied to the HP OpenPM engine for execution}** [Figure 7, Column 9, lines 36-43];

(h) providing the first route to direct the second workflow means, such that the first workflow starts the first object route, and the second workflow starts the first route and the second workflow completes the first route, and the first workflow completes the first object route **{the workflow process represented by Figure 7 is “provided”, or applied to the HP OpenPM engine}** [Figure 7, Column 9, lines 36-43].

As per (f) and (h), Du et al. does not explicitly teach separate workflow routes in which routes are not connected or reliant on one another.

Further, Du et al. does not explicitly teach the step of (d) defining a second workflow means, separate, independent, and operating asynchronous from the first workflow means, directed by a route, a sequence of steps.

However, Kim et al. teaches the use of exception paths, a different (i.e., separate, not connected or reliant on another route) path from the regular transition path taken when the deadline is passed [Paragraph 164], as well as asynchronous execution of sub-processes [Figure 13, Paragraphs 169, 172, and 173, where a sub-process activity is initiated manually or automatically when the workflow reaches the sub-process activity, and the child process starts its execution when the workflow of the parent process reaches the sub-process activity... unlike the synchronous option, the parent process continues the activities following the sub-process activity, without waiting for the completion of the child process].

Du et al. is directed towards workflow management, namely in definition and creating workflow processes and sequences. Similarly, Kim et al. is directed towards modeling and executing a business process workflow. Thus, Du et al. and Kim et al. are deemed to be analogous references within the context of defining and managing

workflow processes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Du et al. to include independent and asynchronous workflow routes, as taught by Kim et al., because doing so enhances the teachings of Du et al. by supporting a workflow process between any number of application systems in any number of locations, as well as allowing any number of parallel but independent workflow processes to be initiated in response to a notification that a particular transaction has occurred, and further enables processes to be executed without waiting for the completion of child or parent processes, as taught by Kim et al. [Paragraph 173], which leads to improved processing time and efficiency.

As per claim 22, Du et al. teaches the method of claim 21, wherein a second object step with an associated third route segment follows the second object step in the sequence of object steps of the first object route **(forward arcs represent the normal execution flow of process activities and form a directed acyclic graph. Successful completion of a node at the source end of a forward arc triggers the starting of the node at the destination end of the forward arc; also see the arrow pointed connections linking each of the rule nodes and work nodes)** and the third route segment provides a feedback connection to the second route segment in forming the first route **(reset arcs are used to support repetitions or explore alternatives in a workflow process. Reset arcs differ from forward arcs in that they reach backwards in the process graph; also see the dashed connection between rule nodes R3, R6 and R7 in Figure 7)** [Column 8, lines 26-34, Figure 7].

As per claim 23, Du et al. teaches the method of claim 21 wherein the first object step with an associated fourth route segment as an alternative route segment such that either the first route segment or the fourth route segment is selected when forming the first route **{in Figure 7, rule node 3 may be proceeded by either rule node 2 or work node 4}** [Figure 7].

As per claim 24, Du et al. teaches the method of claim 21 wherein the first route segment signals the first object step when the first route segment begins directing the second workflow **{at rule node 8, the first route segment is completed and event 3 (138) is raised, which leads to the beginning of 124}** (status information of each process instance and load information can be queried using the process status monitor modules via the process status monitoring interface; In OpenPM, a rule node contains a list of condition-action rules, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs) [Figure 7, Column 7, lines 59-67, Column 19, lines 60-67].

As per claim 25, Du et al. teaches the method of claim 21 wherein the first route segment signals the first object step when the first route segment completes directing the second workflow **{rule module 6 is executed after work module 9}** (status

information of each process instance and load information can be queried using the process status monitor modules via the process status monitoring interface; In OpenPM, a rule node contains a list of condition-action rules, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs) [Figure 7, Column 7, lines 59-67].

As per claims 26-28, Du et al. teaches the step of querying status information of each process instance and load information by using the process status modules via the process status monitoring interface [Column 7, lines 63-67], as well as storing a list of condition-action rules, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs [Column 19, lines 60-67].

Du et al. does not explicitly teach the use of barcode and radio frequency identifiers. However, it has been admitted as prior art, as a result of improperly and/or untimely challenged Official Notice, that it is old and well known in the art that bar code readers and radio frequency (RFID) tags are amongst the plurality of input/output devices that are used in business procedure. Bar codes and RFID tags are beneficial in that they enable companies to track, manage, and monitor the real-time status of and

whereabouts of inventory, especially in the manufacturing process. They also give valuable information about the quantity of products being bought or received. Therefore, one of ordinary skill in the art at the time of invention would modify the teachings of Du et al. to include barcodes and radio frequency identifiers to obtain the benefits of said identifiers to track, manage and monitor the real-time status of inventory within established workflow processes.

Claims 29-31 recite limitations already addressed by the rejection of claims 21-23 above; therefore, the same rejections apply.

Claims 32-39 recite limitations already addressed by the rejection of claims 21-28 above, respectively; therefore, the same rejections apply.

In addition, as per claim 32, Du et al. provides a [computer] system and method for distributed resource management in a computer network [Column 6, lines 19-20, network 11] that includes multiple computers operating under control of workflow management software systems [Column 4, lines 38-43]. Du et al. also implements the HP OpenPM workflow management system, an open, enterprise-capable, object-oriented workflow process management system to manage business activities that support complex enterprise processes in a distributed, heterogeneous computing environment [Column 7, lines 24-29]. The core of the HP OpenPM system is the HP OpenPM engine, which enables the HP OpenPM engine to interact with workflow

process designer, workflow process instance execution, workflow process monitor, resource management and business object management modules [Column 7, lines 45-52].

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Arai et al. (US 2002/0046072) teaches a workflow system that includes a sub-workflow defining means for defining a sub-workflow that determines a work flow within a section.

Notani et al. (US Patent #6,397,191 and 6,397,192) teaches object-oriented workflow for multi-enterprise collaboration.

Du et al. (US Patent #6,041,306) teaches performing flexible workflow process execution in a distributed workflow management system.

Hecht (US Patent #5,535,322) teaches a work flow manager to manage and control the flow of work items from one function to the next in a well-defined application process to achieve the complete processing of those work items.

Saito et al. (US Patent #5,867,824) teaches a workflow method and system which permits an integrated management of the definitions of the business processes placed under decentralized management.

Swenson et al. (US Patent #5,490,097) teaches a method of using a computer system to model work processes that allows access by multiple users and dynamic modification of the work process model.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER CHOI whose telephone number is (571)272-6971. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 18, 2008

/P. C./
Examiner, Art Unit 3623
/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623